

APPARATUS AND METHOD FOR IDENTIFICATION  
OF A NEW SECONDARY CODE START POINT FOLLOWING  
A RETURN FROM A SECONDARY CODE EXECUTION

**Abstract of the Invention**

1 When an NEW SECONDARY CODE EXECUTION START POINT signal is  
2 generated in a target processor during a test procedure  
3 after the return from an interrupt service routine (i.e.,  
4 an original secondary code sequence), a sync marker is  
5 generated in a program counter trace stream. The sync  
6 marker includes a plurality of packets, the packets  
7 identifying that the sync marker is has been generated as a  
8 result of the NEW SECONDARY CODE EXECUTION START POINT  
9 signal. The new secondary program code start point sync  
10 marker identifies the absolute program counter address at  
11 the time of the generation of the NEW SECONDARY CODE  
12 EXECUTION START POINT signal and relates the NEW SECONDARY  
13 CODE EXECUTION START POINT signal sync marker to a timing  
14 trace stream. The NEW SECONDARY CODE EXECUTION START POINT  
15 signal is generated after the instructions from the  
16 original secondary code sequence are removed from the  
17 pipeline flattener and the first new secondary code  
18 instruction is removed from the pipeline flattener. In  
19 this manner, the host processing unit is provided with the  
20 initiation and the context of a new secondary code  
21 execution.